

L Number	Hits	Search Text	DB	Time stamp
-	1	"20030093943"	USPAT; US-PGPUB	2004/10/30 09:48
-	1	"20030093943" and toluene	USPAT; US-PGPUB	2004/10/30 09:50
-	44	(antioxidant with thermal) and 44/\$.ccls.	USPAT; US-PGPUB	2004/10/30 09:51
-	9	(antioxidant with thermal) with (vitamin or tocopherol)	USPAT; US-PGPUB	2004/10/30 09:55
-	0	(antioxidant with thermal) with (vitamin or tocopherol) with food	USPAT; US-PGPUB	2004/10/30 09:55
-	0	(antioxidant with thermal) with (vitamin or tocopherol) with food	EPO; JPO; DERWENT	2004/10/30 09:55
-	0	((antioxidant with thermal) with (vitamin or tocopherol)) and food	EPO; JPO; DERWENT	2004/10/30 09:56
-	2	((antioxidant with thermal) and (vitamin or tocopherol)) and food	EPO; JPO; DERWENT	2004/10/30 09:57
-	111	((antioxidant with thermal) and (vitamin or tocopherol)) and food	USPAT; US-PGPUB	2004/10/30 11:08
-	23	44/\$.ccls. and (carotene or lycopene or leutin or betatene or carotenoid)	USPAT; US-PGPUB	2004/10/30 11:08

# STN Columbus

\* \* \* \* \* Welcome to STN International \* \* \* \* \*

NEWS 1 Web Page URLs for STN Seminar Schedule - N. America  
NEWS 2 "Ask CAS" for self-help around the clock  
NEWS 3 JUL 12 BEILSTEIN enhanced with new display and select options,  
resulting in a closer connection to BABS  
NEWS 4 AUG 02 IFIPAT/IFIUDB/IFICDB reloaded with new search and display  
fields  
NEWS 5 AUG 02 CAPlus and CA patent records enhanced with European and Japan  
Patent Office Classifications  
NEWS 6 AUG 02 The Analysis Edition of STN Express with Discover!  
(Version 7.01 for Windows) now available  
NEWS 7 AUG 27 BIOCOMMERCE: Changes and enhancements to content coverage  
NEWS 8 AUG 27 BIOTECHABS/BIOTECHDS: Two new display fields added for legal  
status data from INPADOC  
NEWS 9 SEP 01 INPADOC: New family current-awareness alert (SDI) available  
NEWS 10 SEP 01 New pricing for the Save Answers for SciFinder Wizard within  
STN Express with Discover!  
NEWS 11 SEP 01 New display format, HITSTR, available in WPIDS/WPINDEX/WPIX  
NEWS 12 SEP 27 STANDARDS will no longer be available on STN  
NEWS 13 SEP 27 SWETSCAN will no longer be available on STN  
NEWS 14 OCT 28 KOREAPAT now available on STN  
  
NEWS EXPRESS OCTOBER 29 CURRENT WINDOWS VERSION IS V7.01A, CURRENT  
MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),  
AND CURRENT DISCOVER FILE IS DATED 11 AUGUST 2004  
NEWS HOURS STN Operating Hours Plus Help Desk Availability  
NEWS INTER General Internet Information  
NEWS LOGIN Welcome Banner and News Items  
NEWS PHONE Direct Dial and Telecommunication Network Access to STN  
NEWS WWW CAS World Wide Web Site (general information)

Enter NEWS followed by the item number or name to see news on that  
specific topic.

All use of STN is subject to the provisions of the STN Customer  
agreement. Please note that this agreement limits use to scientific  
research. Use for software development or design or implementation  
of commercial gateways or other similar uses is prohibited and may  
result in loss of user privileges and other penalties.

\* \* \* \* \* STN Columbus \* \* \* \* \*

FILE 'HOME' ENTERED AT 17:00:22 ON 29 OCT 2004

=> file caplus

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.21	0.21

FILE 'CAPLUS' ENTERED AT 17:00:37 ON 29 OCT 2004

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

COPYRIGHT (C) 2004 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is  
held by the publishers listed in the PUBLISHER (PB) field (available  
for records published or updated in Chemical Abstracts after December

## STN Columbus

26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 29 Oct 2004 VOL 141 ISS 19

FILE LAST UPDATED: 28 Oct 2004 (20041028/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s fuel and (vitamin e or tocopherol)

340874 FUEL

154939 FUELS

389767 FUEL

(FUEL OR FUELS)

176528 VITAMIN

49415 VITAMINS

195026 VITAMIN

(VITAMIN OR VITAMINS)

1802584 E

28667 VITAMIN E

(VITAMIN(W)E)

27205 TOCOPHEROL

8044 TOCOPHEROLS

29454 TOCOPHEROL

(TOCOPHEROL OR TOCOPHEROLS)

L1 45 FUEL AND (VITAMIN E OR TOCOPHEROL)

=> s l1 and carotene

27960 CAROTENE

20157 CAROTENES

38399 CAROTENE

(CAROTENE OR CAROTENES)

L2 2 L1 AND CAROTENE

=> d l2 1-2 all

L2 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2004 ACS on STN

Full Text

AN 2003:334695 CAPLUS

DN 138:336957

ED Entered STN: 02 May 2003

TI Corn oil processing and products comprising corn oil and corn meal obtained from corn

IN Jakel, Neal T.; Kotowski, Doug; Ingvalson, Joel; Beaver, Michael J.; Ulrich, James F.; Amore, Francis; Tupy, Michael J.; Fox, Eugene J.; Patist, Alexander

PA Renessen, LLC, USA

SO U.S. Pat. Appl. Publ., 25 pp., Cont.-in-part of U.S. Ser. No. 927,836. CODEN: USXXCO

DT Patent

LA English

IC ICM C11C001-00

ICS A21D002-00

NCL 554010000; 554020000; 426622000

CC 17-9 (Food and Feed Chemistry)

Section cross-reference(s): 18, 45, 51, 62

FAN.CNT 10

## STN Columbus

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2003083512	A1	20030501	US 2002-47725	20020115
	US 6610867	B2	20030826		
	US 2002193617	A1	20021219	US 2001-927836	20010810
	US 6648930	B2	20031118		
	US 2003224496	A1	20031204	US 2003-368521	20030218
PRAI	US 2000-637843	A2	20000810		
	US 2001-927836	A2	20010810		
	US 1999-249280	A2	19990211		
	US 2002-47725	A2	20020115		
CLASS					
	PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES		
	US 2003083512	ICM	C11C001-00		
		ICS	A21D002-00		
		NCL	554010000; 554020000; 426622000		
	US 2003083512	ECLA	A23D009/00; A23K001/18K; A23K001/18L2; A23K001/18N; A23K001/18S; A23L001/10M; A23L001/105B; A23L001/30C; C08B030/10; C08L099/00; C11B001/04; C11B001/10; C11B003/00B; C12P007/06; A23D009/007; A23K001/00B2; A23K001/14; A23K001/16G; A23K001/16L; A23K001/18		
	US 2002193617	ECLA	A23D009/00; C11B001/10; C11B003/00B; C12P007/06; A23D009/007; A23J001/14C2; A23K001/00B2; A23K001/04; A23K110/; A23K001/10C; A23K001/14; A23K001/16G; A23K001/16L; A23K001/18; A23K001/18K; A23K001/18L2; A23K001/18N; A23K001/18S; A23L001/10M; A23L001/30C; B02B001/00; C08B030/10; C08L099/00; C11B001/04; C11B001/06		
	US 2003224496	ECLA	A23D009/00; A23D009/007; A23J001/14C2; A23K001/00B2; A23K001/04; A23K001/10; A23K001/10C; A23K001/14; A23K; A23K001/16L; A23K001/18; A23K001/18K; A23K001/18L2; A23K001/18N; A23K001/18S; A23L001/10M; A23L001/105; A23L001/30C; B02B001/00; C08B030/10; C08L099/00; C11B001/04; C11B001/06; C11B001/10; C11B003/00B; C12P		
AB	Corn oil and corn meal obtained from corn are included in useful products. The corn oil is extd. from the corn to form the corn meal. The corn grain process generally includes the steps of cracking corn grain having a total oil content of from about 3% to 30% by wt. and extg. the corn oil from the cracked corn grain. The corn oil is useful for making nutritionally enhanced edible oil or cooking oil, lubricants, biodiesel, <b>fuel</b> , cosmetics and oil-based or oil-contg. chem. products. The extd. corn meal is useful for making enhanced animal feed rations, snack food, blended food products, cosmetics, and fermm. broth additive.				
ST	corn meal oil manuf feed food <b>fuel</b> cosmetic				
IT	Fats and Glyceridic oils, biological studies				
	RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)				
	(animal; corn oil processing and products comprising corn oil and corn meal obtained from corn)				
IT	Food				
	(bars; corn oil processing and products comprising corn oil and corn meal obtained from corn)				
IT	Diesel <b>fuel</b> substitutes				
	(biodiesel; corn oil processing and products comprising corn oil and corn meal obtained from corn)				
IT	Oryza sativa				
	(bran; corn oil processing and products comprising corn oil and corn meal obtained from corn)				
IT	Bakery products				
	Triticum aestivum				
	(byproducts; corn oil processing and products comprising corn oil and corn meal obtained from corn)				

## STN Columbus

- IT Solvent extraction  
(continuous; corn oil processing and products comprising corn oil and corn meal obtained from corn)
- IT Food viscosity  
(controls for; corn oil processing and products comprising corn oil and corn meal obtained from corn)
- IT Glutens  
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
(corn meal; corn oil processing and products comprising corn oil and corn meal obtained from corn)
- IT Acidity  
Air  
Antioxidants  
Biodegradable materials  
Bleaching  
Bread  
Breakfast cereal  
Canola  
Cottonseed  
Crosslinking agents  
Deodorization  
Dietary fiber  
Feed additives  
Feeding experiment  
Food additives  
Food processing  
Gallus domesticus  
Glycine max  
Helianthus annuus  
Herb  
Hordeum vulgare  
Micelles  
Nutrients  
Pigments, biological  
Rapeseed  
Rapeseed  
Solanum tuberosum  
Sorghum bicolor  
Spices  
Thickening agents  
Vinegar  
Zea mays  
(corn oil processing and products comprising corn oil and corn meal obtained from corn)
- IT Aldehydes, biological studies  
Anhydrides  
Epoxides  
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)  
(corn oil processing and products comprising corn oil and corn meal obtained from corn)
- IT Amino acids, biological studies  
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
(corn oil processing and products comprising corn oil and corn meal obtained from corn)
- IT Canola oil  
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
(corn oil processing and products comprising corn oil and corn meal obtained from corn)
- IT Carotenes, biological studies  
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
(corn oil processing and products comprising corn oil and corn meal obtained from corn)

## STN Columbus

- obtained from corn)
- IT Enzymes, biological studies
  - RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
  - (corn oil processing and products comprising corn oil and corn meal obtained from corn)
- IT Fats and Glyceridic oils, biological studies
  - RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
  - (corn oil processing and products comprising corn oil and corn meal obtained from corn)
- IT Lipids, biological studies
  - RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
  - (corn oil processing and products comprising corn oil and corn meal obtained from corn)
- IT Mineral elements, biological studies
  - RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
  - (corn oil processing and products comprising corn oil and corn meal obtained from corn)
- IT Olive oil
  - RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
  - (corn oil processing and products comprising corn oil and corn meal obtained from corn)
- IT Palm oil
  - RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
  - (corn oil processing and products comprising corn oil and corn meal obtained from corn)
- IT Proteins
  - RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
  - (corn oil processing and products comprising corn oil and corn meal obtained from corn)
- IT Safflower oil
  - RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
  - (corn oil processing and products comprising corn oil and corn meal obtained from corn)
- IT Soybean oil
  - RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
  - (corn oil processing and products comprising corn oil and corn meal obtained from corn)
- IT Sterols
  - RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
  - (corn oil processing and products comprising corn oil and corn meal obtained from corn)
- IT Sunflower oil
  - RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
  - (corn oil processing and products comprising corn oil and corn meal obtained from corn)
- IT **Tocopherols**
  - RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
  - (corn oil processing and products comprising corn oil and corn meal obtained from corn)
- IT Vitamins
  - RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
  - (corn oil processing and products comprising corn oil and corn meal obtained from corn)
- IT Corn oil
  - RL: FFD (Food or feed use); IMF (Industrial manufacture); BIOL (Biological study); PREP (Preparation); USES (Uses)
  - (corn oil processing and products comprising corn oil and corn meal obtained from corn)
- IT Flours and Meals
  - (corn; corn oil processing and products comprising corn oil and corn meal obtained from corn)
- IT Bos taurus

## STN Columbus

- (dairy cattle; corn oil processing and products comprising corn oil and corn meal obtained from corn)
- IT Vitamins

RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
 (fat-sol.; corn oil processing and products comprising corn oil and corn meal obtained from corn)
- IT Flours and Meals

(feather meal; corn oil processing and products comprising corn oil and corn meal obtained from corn)
- IT Aquaculture

Bos taurus  
 Equus caballus  
 Poultry  
 Sus scrofa domestica  
 (feed for; corn oil processing and products comprising corn oil and corn meal obtained from corn)
- IT Catfish

Tilapia  
 (feeding; corn oil processing and products comprising corn oil and corn meal obtained from corn)
- IT Zea mays

(flour and meal; corn oil processing and products comprising corn oil and corn meal obtained from corn)
- IT Binders

(for food; corn oil processing and products comprising corn oil and corn meal obtained from corn)
- IT Oryza sativa

(hulls; corn oil processing and products comprising corn oil and corn meal obtained from corn)
- IT Beverages

(low calorie; corn oil processing and products comprising corn oil and corn meal obtained from corn)
- IT Feather

(meal; corn oil processing and products comprising corn oil and corn meal obtained from corn)
- IT Bone meal

Meat  
 (meat-and-bone meal; corn oil processing and products comprising corn oil and corn meal obtained from corn)
- IT Triticum aestivum

(middlings; corn oil processing and products comprising corn oil and corn meal obtained from corn)
- IT Cooking

(oils for; corn oil processing and products comprising corn oil and corn meal obtained from corn)
- IT Seed

(oilseed, meal; corn oil processing and products comprising corn oil and corn meal obtained from corn)
- IT Flours and Meals

(oilseed; corn oil processing and products comprising corn oil and corn meal obtained from corn)
- IT Fats and Glyceridic oils, biological studies

Fats and Glyceridic oils, biological studies  
 RL: BUU (Biological use, unclassified); FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
 (partially hydrogenated; corn oil processing and products comprising corn oil and corn meal obtained from corn)
- IT Feed

(pet; corn oil processing and products comprising corn oil and corn meal obtained from corn)
- IT Food

(porridge; corn oil processing and products comprising corn oil and

# STN Columbus

- corn meal obtained from corn)
- IT Bran  
(rice; corn oil processing and products comprising corn oil and corn meal obtained from corn)
- IT Food  
(snack; corn oil processing and products comprising corn oil and corn meal obtained from corn)
- IT Beverages  
(sports; corn oil processing and products comprising corn oil and corn meal obtained from corn)
- IT Fats and Glyceridic oils, biological studies  
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
(stearins, oxy-; corn oil processing and products comprising corn oil and corn meal obtained from corn)
- IT Fuel oil  
(substitutes; corn oil processing and products comprising corn oil and corn meal obtained from corn)
- IT Feed  
(swine; corn oil processing and products comprising corn oil and corn meal obtained from corn)
- IT 7440-37-1, Argon, biological studies 7727-37-9, Nitrogen, biological studies  
RL: BUU (Biological use, unclassified); FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
(corn oil processing and products comprising corn oil and corn meal obtained from corn)
- IT 56-87-1, L-Lysine, biological studies 63-68-3, L-Methionine, biological studies 64-17-5, Ethanol, biological studies 67-63-0, Isopropyl alcohol, biological studies 73-22-3, L-Tryptophan, biological studies 77-92-9, Citric acid, biological studies 77-92-9D, Citric acid, monoglyceride derivs. 110-54-3, Hexane, biological studies 121-79-9, Propyl gallate 123-28-4, Dilauryl thiodipropionate 128-37-0, BHT, biological studies 137-66-6, Ascorbyl palmitate 458-37-7, Curcumin 994-36-5, Sodium citrate 1107-26-2,  $\beta$ -Apo-8'-carotenal 6829-55-6, Tocotrienol 7235-40-7,  $\beta$ -Carotene 7647-14-5, Sodium chloride, biological studies 7664-38-2, Phosphoric acid, biological studies 9000-90-2,  $\alpha$ -Amylase 9001-92-7, Protease 9005-25-8, Starch, biological studies 9016-00-6, Dimethyl polysiloxane 9032-08-0, Glucoamylase 25013-16-5, BHA 25395-66-8, Ascorbyl stearate 39413-05-3, Isopropyl citrate  
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
(corn oil processing and products comprising corn oil and corn meal obtained from corn)
- IT 1393-63-1, Annatto  
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
(ext.; corn oil processing and products comprising corn oil and corn meal obtained from corn)
- IT 124-38-9, Carbon dioxide, biological studies  
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
(supercrit.; corn oil processing and products comprising corn oil and corn meal obtained from corn)

L2 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2004 ACS on STN

## Full Text

AN 1998:410640 CAPLUS

DN 129:86023

ED Entered STN: 04 Jul 1998

TI Aerosol containing vitamin A or a derivative thereof

IN Thoma, Karl; Rothenberger, Siegfried; Hein, Thomas

PA Hermes Fabrik Pharmazeutischer Praeparate Franz Gradinger G.m.b.H. Co., Germany

SO Eur. Pat. Appl., 7 pp.

## STN Columbus

CODEN: EPXXDW  
 DT Patent  
 LA German  
 IC ICM A61K009-12  
 ICS A61K031-07  
 CC 63-6 (Pharmaceuticals)  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 848949	A1	19980624	EP 1997-122419	19971218
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	DE 19652790	A1	19980625	DE 1996-19652790	19961218
PRAI	DE 1996-19652790		19961218		

## CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
EP 848949	ICM	A61K009-12
	ICS	A61K031-07

AB Vitamin A-contg. pharmaceutical aerosols for use on the respiratory tract mucosa are provided for treatment of disorders affecting the respiratory epithelium, e.g. neoplasms, metastases, squamous metaplasia, bronchitis, and newborn bronchopulmonary dysplasia. These compns. contain satd. hydrocarbons as solubilizers to improve the aerosolization of the active agent. At low concns., these hydrocarbons do not display the flammability, toxicity, and unpleasant flavor seen at higher concns. Thus, an aerosol prepn. contained retinol palmitate 1.10, DL- $\alpha$ -tocopherol 0.11, tetrafluoroethane 76.71, and isobutane 22.08 wt.%.  
 ST vitamin A solubilizer hydrocarbon aerosol; inhalant retinol solubilizer isobutane  
 IT Antitumor agents  
 Propellants (**fuels**)  
 Solubilizers  
 (aerosol contg. vitamin A or deriv. thereof)  
 IT **Carotenes**, biological studies  
 Retinoids  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (aerosol contg. vitamin A or deriv. thereof)  
 IT Hydrocarbons, biological studies  
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (aerosol contg. vitamin A or deriv. thereof)  
 IT Bronchi  
 (bronchitis; aerosol contg. vitamin A or deriv. thereof)  
 IT Newborn  
 (bronchopulmonary dysplasia in; aerosol contg. vitamin A or deriv. thereof)  
 IT Lung, disease  
 (bronchopulmonary dysplasia, in newborn; aerosol contg. vitamin A or deriv. thereof)  
 IT Bronchi  
 Bronchi  
 (carcinoma; aerosol contg. vitamin A or deriv. thereof)  
 IT Respiratory tract  
 (ciliated epithelium, disorder; aerosol contg. vitamin A or deriv. thereof)  
 IT Epithelium  
 (ciliated, respiratory tract, disorder; aerosol contg. vitamin A or deriv. thereof)  
 IT Mucous membrane

# STN Columbus

Mucous membrane  
(disease; aerosol contg. vitamin A or deriv. thereof)

IT Cell differentiation  
(disorder, of tracheobronchial tract; aerosol contg. vitamin A or deriv. thereof)

IT Poisons, nonbiological source  
(gaseous, tracheobronchial epithelium damage from; aerosol contg. vitamin A or deriv. thereof)

IT Drug delivery systems  
(inhalants; aerosol contg. vitamin A or deriv. thereof)

IT Bronchi  
Trachea (anatomical)  
Trachea (anatomical)  
(mucosa, disease; aerosol contg. vitamin A or deriv. thereof)

IT Respiratory tract  
Respiratory tract  
(mucosa; aerosol contg. vitamin A or deriv. thereof)

IT Gland  
(mucous, disorder; aerosol contg. vitamin A or deriv. thereof)

IT Mucous membrane  
Mucous membrane  
(respiratory tract; aerosol contg. vitamin A or deriv. thereof)

IT Epithelium  
(squamous, disease, metaplasia; aerosol contg. vitamin A or deriv. thereof)

IT Mucous membrane  
Mucous membrane  
(trachea, disease; aerosol contg. vitamin A or deriv. thereof)

IT Dust  
(tracheobronchial epithelium damage from; aerosol contg. vitamin A or deriv. thereof)

IT 68-26-8, Retinol 68-26-8D, Retinol, esters 79-81-2, Retinol palmitate  
302-79-4, Retinoic acid 302-79-4D, Retinoic acid, esters 7235-40-7,  
**β-Carotene**  
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(aerosol contg. vitamin A or deriv. thereof)

IT 74-98-6, Propane, biological studies 75-28-5, Isobutane 106-97-8,  
n-Butane, biological studies  
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(solubilizer; aerosol contg. vitamin A or deriv. thereof)

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Boehringer Ingelheim Int; WO 9111496 A CAPLUS

(2) Glaxo Group Ltd; WO 9311743 A CAPLUS

(3) Gradinger F Hermes Pharma; EP 0352412 A CAPLUS

=> s grain or fescue or clover or wheat or barley or oats or rye or sorghum or flax or tritica

273768 GRAIN

131456 GRAINS

352360 GRAIN  
(GRAIN OR GRAINS)

3505 FESCUE

50 FESCUES

3514 FESCUE  
(FESCUE OR FESCUES)

14319 CLOVER

501 CLOVERS

14442 CLOVER  
(CLOVER OR CLOVERS)

STN Columbus

114091 WHEAT  
     2769 WHEATS  
 114186 WHEAT  
         (WHEAT OR WHEATS)  
 46763 BARLEY  
     896 BARLEYS  
 46815 BARLEY  
         (BARLEY OR BARLEYS)  
 13185 OATS  
 15109 RYE  
     62 RYES  
 15120 RYE  
         (RYE OR RYES)  
 13119 SORGHUM  
     343 SORGHUMS  
 13147 SORGHUM  
         (SORGHUM OR SORGHUMS)  
 8663 FLAX  
     17 FLAXES  
 8668 FLAX  
         (FLAX OR FLAXES)  
 1923 TRITICALE  
     126 TRITICALES  
 1931 TRITICALE  
         (TRITICALE OR TRITICALES)  
 77622 RICE  
     461 RICES  
 77638 RICE  
         (RICE OR RICES)  
     4 TRITICALE RICE  
         (TRITICALE(W)RICE)  
 111199 CORN  
     345 CORNS  
 111319 CORN  
         (CORN OR CORNS)  
     442 SPELT  
     70 SPELTS  
     502 SPELT  
         (SPELT OR SPELTS)  
 5204 MILLET  
     206 MILLETS  
 5246 MILLET  
         (MILLET OR MILLETS)  
 2537 AMARANTH  
     25 AMARANTHS  
 2547 AMARANTH  
         (AMARANTH OR AMARANTHS)  
 3511 BUCKWHEAT  
     12 BUCKWHEATS  
 3513 BUCKWHEAT  
         (BUCKWHEAT OR BUCKWHEATS)  
 566 QUINOA  
     1 QUINOAS  
 567 QUINOA  
         (QUINOA OR QUINOAS)  
     10 KAMUT  
 2335 TEFF  
     9 TEFFS  
 2339 TEFF  
         (TEFF OR TEFFS)  
 L3 609809 GRAIN OR FESCUE OR CLOVER OR WHEAT OR BARLEY OR OATS OR RYE OR  
         SORGHUM OR FLAX OR TRITICALE RICE OR CORN OR SPELT OR MILLET OR

## STN Columbus

AMARANTH OR BUCKWHEAT OR QUINOA OR KAMUT OR TEFF

=> 3 and (carotene or carotenoid or lycopene lutein or betatene)

3 IS NOT A RECOGNIZED COMMAND

The previous command name entered was not recognized by the system.

For a list of commands available to you in the current file, enter

"HELP COMMANDS" at an arrow prompt (=>).

=> s 13 and (carotene or carotenoid or lycopene lutein or betatene)

27960 CAROTENE

20157 CAROTENES

38399 CAROTENE

(CAROTENE OR CAROTENES)

17279 CAROTENOID

22985 CAROTENOIDS

27802 CAROTENOID

(CAROTENOID OR CAROTENOIDS)

4100 LYCOPENE

53 LYCOPENES

4110 LYCOPENE

(LYCOPENE OR LYCOPENES)

5027 LUTEIN

36 LUTEINS

5036 LUTEIN

(LUTEIN OR LUTEINS)

84 LYCOPENE LUTEIN

(LYCOPENE(W)LUTEIN)

13 BETATENE

L4 4094 L3 AND (CAROTENE OR CAROTENOID OR LYCOPENE LUTEIN OR BETATENE)

=> s 14 and (vegetable oil or meadowfoam or peanut or cottonseed or rapeseed or rape seed or m

74343 VEGETABLE

24529 VEGETABLES

85891 VEGETABLE

(VEGETABLE OR VEGETABLES)

688257 OIL

329781 OILS

775486 OIL

(OIL OR OILS)

18323 VEGETABLE OIL

(VEGETABLE(W)OIL)

162 MEADOWFOAM

20918 PEANUT

4944 PEANUTS

22197 PEANUT

(PEANUT OR PEANUTS)

16294 COTTONSEED

428 COTTONSEEDS

16373 COTTONSEED

(COTTONSEED OR COTTONSEEDS)

8261 RAPESEED

183 RAPESEEDS

8302 RAPESEED

(RAPESEED OR RAPESEEDS)

17950 RAPE

67 RAPES

17964 RAPE

(RAPE OR RAPES)

123220 SEED

86209 SEEDS

165907 SEED

(SEED OR SEEDS)

# STN Columbus

2185 RAPE SEED  
 (RAPE(W) SEED)  
 651 MACADAMIA  
 3 MACADAMIAS  
 651 MACADAMIA  
 (MACADAMIA OR MACADAMIAS)  
 2573 AVOCADO  
 343 AVOCADOS  
 2629 AVOCADO  
 (AVOCADO OR AVOCADOS)  
 14682 PALM  
 1143 PALMS  
 15071 PALM  
 (PALM OR PALMS)  
 30243 CASTOR  
 15 CASTORS  
 30255 CASTOR  
 (CASTOR OR CASTORS)  
 L5 316 L4 AND (VEGETABLE OIL OR MEADOWFOAM OR PEANUT OR COTTONSEED OR  
 RAPESEED OR RAPE SEED OR MACADAMIA OR AVOCADO OR PALM OR CASTOR)  
  
 => s 15 and (thermal or heat?)  
 954571 THERMAL  
 66 THERMALS  
 954600 THERMAL  
 (THERMAL OR THERMALS)  
 2156456 HEAT?  
 L6 36 L5 AND (THERMAL OR HEAT?)  
  
 => d 16 1-36 ti  
  
 L6 ANSWER 1 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN  
 TI Production method for particles containing lipophilic compounds, and  
 apparatus therefor  
  
 L6 ANSWER 2 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN  
 TI Edible fat emulsions as food spreads.  
  
 L6 ANSWER 3 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN  
 TI  $\beta,\beta$ -Carotene and 2,2,4-trimethyl-6-ethoxy-1,2-dihydroquinoline  
 mixtures as diesel fuel stabilizers and cetane improvers  
  
 L6 ANSWER 4 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN  
 TI A strong constitutive promoter from the parsley ubiquitin gene and its use  
 in expression of foreign genes in plants  
  
 L6 ANSWER 5 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN  
 TI Cosmetic compositions comprising silicone gels  
  
 L6 ANSWER 6 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN  
 TI Cosmetic compositions comprising silicone gels comprising entrapped,  
 occluded or encapsulated pigments  
  
 L6 ANSWER 7 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN  
 TI Optothermal window method for on-line monitoring of decay kinetics of  
 trans- $\beta$ -carotene in thermally treated vegetable oils  
  
 L6 ANSWER 8 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN  
 TI Purification and characterization of an autoclavable superoxide dismutase  
 (SOD) isozyme from *Potentilla atrosanguinea*, and use of the SOD in  
 cosmetic, food and pharmaceutical compositions

## STN Columbus

- L6 ANSWER 9 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN  
TI Fast quality screening of **vegetable oils** by HPLC-**thermal** lens spectrometric detection
- L6 ANSWER 10 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN  
TI Process for producing **carotenoid** emulsion
- L6 ANSWER 11 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN  
TI Ultrasensitive assays of trans- and cis- **$\beta$ -carotenes** in **vegetable oils** by high-performance liquid chromatography-**thermal** lens detection
- L6 ANSWER 12 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN  
TI Unsaponifiables-enriched **vegetable oil** as food ingredient
- L6 ANSWER 13 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN  
TI Encapsulation of sensitive liquid components into a matrix to obtain discrete shelf-stable particles
- L6 ANSWER 14 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN  
TI Nutrient intensified oil and its preparing process
- L6 ANSWER 15 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN  
TI Diurnal changes of photooxidation response in leaves of C3 and C4 plants
- L6 ANSWER 16 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN  
TI Effect of traditional processing practices on the content of total **carotenoid**,  **$\beta$ -carotene**,  **$\alpha$ -carotene** and vitamin A activity of selected Tanzanian vegetables
- L6 ANSWER 17 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN  
TI Detection of process components in food process streams by fluorescence
- L6 ANSWER 18 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN  
TI Compositions containing water-soluble hemicellulose and natural resins
- L6 ANSWER 19 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN  
TI **Carotene** removal from **corn** meal
- L6 ANSWER 20 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN  
TI Process of obtaining the sea buckthorn oil "aska-tesh"
- L6 ANSWER 21 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN  
TI Cream cheese type food
- L6 ANSWER 22 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN  
TI **Rapeseed** meal in the diet of common carp reared in **heated waters**. V. **Carotenoids** in diets and fish tissues
- L6 ANSWER 23 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN  
TI Low fat comestible spread
- L6 ANSWER 24 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN  
TI Stable clear liquid release agent
- L6 ANSWER 25 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN  
TI The preparation of water-soluble powdered  **$\beta$ -carotene** and its preservation stability
- L6 ANSWER 26 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN  
TI Fixing lipophilic substances on starch, starch derivatives, or materials containing them

## STN Columbus

L6 ANSWER 27 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN  
 TI Suitability of some Egyptian clays for bleaching **cottonseed** oil. III.  
 Regeneration of spent clays

L6 ANSWER 28 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN  
 TI Margarine oil compositions

L6 ANSWER 29 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN  
 TI Preparation of  $\beta$ -**carotene**

L6 ANSWER 30 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN  
 TI Stabilized **carotene** composition

L6 ANSWER 31 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN  
 TI Synthesis of **carotene** homologs

L6 ANSWER 32 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN  
 TI  $\delta$ -Tocopherol. I. Isolation from soybean oil and properties

L6 ANSWER 33 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN  
 TI Chemical estimation of vitamin E in **vegetable oils**

L6 ANSWER 34 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN  
 TI Stabilizing **cottonseed** oil or other glyceridic oils against oxidative  
 deterioration

L6 ANSWER 35 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN  
 TI Improving the quality of milk

L6 ANSWER 36 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN  
 TI Stabilizing fats and oils against rancidity

=> d 16 7 10 23 24 all

L6 ANSWER 7 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN

### Full Text

AN 2003:540724 CAPLUS

DN 139:349781

ED Entered STN: 15 Jul 2003

TI Optothermal window method for on-line monitoring of decay kinetics of  
 trans- $\beta$ -**carotene** in thermally treated **vegetable oils**

AU Ganguli, Otto; Bicanic, Dane; Bonifacic, Marija; Nicoli, Maria Cristina;  
 Chirtoc, Mihai

CS Agrotechnology and Food Sciences, Division of Biophysics, Laser Laboratory  
 for Photoacoustic and Photothermal Research, Wageningen University and  
 Research Centre, Wageningen, 6703 HA, Neth.

SO European Food Research and Technology (2003), 217(1), 74-79  
 CODEN: EFRTFO; ISSN: 1438-2377

PB Springer-Verlag

DT Journal

LA English

CC 17-1 (Food and Feed Chemistry)

AB The optothermal window detection method at 488 nm was used to monitor  
 online the concn. of trans- $\beta$ -**carotene** that was added to several  
**vegetable oils** after treating them at 200° in the presence of  
 air for varying amts. of time. Results obtained for extra virgin oil show  
 a direct proportionality between the rate const. describing the  
 disappearance of trans- $\beta$ -**carotene** and the duration of **thermal**  
 treatment. The rate const. for the decay of trans- $\beta$ -**carotene** in  
 oils treated under identical conditions was also dependent on the type of  
 oil. Trends and individual data are discussed in the light of a possible

# STN Columbus

application of the method for the detn. of the oxidative stability of **vegetable oils**.

- ST **vegetable oil carotene** optothermal window photoacoustic spectroscopy  
 IT Olive oil  
 RL: AMX (Analytical matrix); ANST (Analytical study)  
 (extra virgin; optothermal window method for online monitoring of decay kinetics of trans- $\beta$ -**carotene** in thermally treated **vegetable oils**)
- IT Photoacoustic spectroscopy  
 Reaction kinetics  
 (optothermal window method for online monitoring of decay kinetics of trans- $\beta$ -**carotene** in thermally treated **vegetable oils**)
- IT **Corn** oil  
 Safflower oil  
 Sunflower oil  
 RL: AMX (Analytical matrix); ANST (Analytical study)  
 (optothermal window method for online monitoring of decay kinetics of trans- $\beta$ -**carotene** in thermally treated **vegetable oils**)
- IT Fats and Glyceridic oils, analysis  
 RL: AMX (Analytical matrix); ANST (Analytical study)  
 (vegetable; optothermal window method for online monitoring of decay kinetics of trans- $\beta$ -**carotene** in thermally treated **vegetable oils**)
- IT 7235-40-7,  $\beta$ , $\beta$ -**Carotene**  
 RL: ANT (Analyte); ANST (Analytical study)  
 (optothermal window method for online monitoring of decay kinetics of trans- $\beta$ -**carotene** in thermally treated **vegetable oils**)

RE.CNT 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Bicanic, D; Appl Spectrosc 1995, V49, P1485 CAPLUS
- (2) Chen, B; J Agric Food Chem 1994, V42, P2391 CAPLUS
- (3) Doka, O; Anal Chem 2002, V74, P2157 CAPLUS
- (4) Halliwell, B; Crit Rev Food Sci 1995, V35, P7 CAPLUS
- (5) Helander, P; Meas Sci Technol 1993, V4, P178
- (6) Henry, L; J Am Oil Chem Soc 1998, V75, P823 CAPLUS
- (7) Labuza, T; J Am Oil Chem Soc 1969, V46, P409 CAPLUS
- (8) Loliger, J; J Sci Food Agric 1990, V52, P119
- (9) Matthaues, B; J Am Oil Chem Soc 1996, V73, P1039 CAPLUS
- (10) McQueen, D; Anal Chem 1995, V14, P482 CAPLUS
- (11) Minguez-Mosquera, M; J Sci Food Agric 1995, V67, P153
- (12) Pagano, T; Rev Ing Quim 1999, V15, P11
- (13) Pellegrini, N; J Agric Food Chem 2001, V49, P2532 CAPLUS
- (14) Steenson, D; J Am Oil Chem Soc 2000, V77, P153

L6 ANSWER 10 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN

## Full Text

AN 2002:556118 CAPLUS  
 DN 137:108618  
 ED Entered STN: 26 Jul 2002  
 TI Process for producing **carotenoid** emulsion  
 IN Mori, Toshiki; Mimura, Satoshi; Nakatani, Tomonari  
 PA Kuraray Co., Ltd., Japan  
 SO U.S. Pat. Appl. Publ., 10 pp.  
 CODEN: USXXCO  
 DT Patent  
 LA English  
 IC ICM C09K003-00  
 NCL 516073000  
 CC 17-4 (Food and Feed Chemistry)

## STN Columbus

Section cross-reference(s): 63

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2002099102	A1	20020725	US 2002-52456	20020123
	US 6664300	B2	20031216		
	EP 1227082	A1	20020731	EP 2002-166	20020108
	EP 1227082	B1	20040616		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
	AT 269301	E	20040715	AT 2002-166	20020108
	CN 1367167	A	20020904	CN 2002-100969	20020110
	JP 2002302479	A2	20021018	JP 2002-13194	20020122
	JP 2002316924	A2	20021031	JP 2002-13195	20020122
PRAI	JP 2001-15267	A	20010124		
	JP 2001-15274	A	20010124		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 2002099102	ICM	C09K003-00
	NCL	516073000
US 2002099102	ECLA	C07C175/00B

- AB Disclosed is a process for producing a **carotenoid** emulsion which comprises **heating** a suspension of the **carotenoid** in a high boiling org. liq., by passing the suspension through a conduit of 0.1 to 50 mm inside diam. **heated** to temp. at 120-700° for a residence time of 0.05 to 5 s or by mixing the suspension with a high boiling org. liq. **heated** to the range of 120 to 500° for a time of 0.05 to 10 s, to dissolve the **carotenoid**, and then immediately adding the resulting soln. into an aq. soln. of an emulsifier to emulsify the soln. By this prodn. process, an emulsion contg. a **carotenoid** as an effective ingredient can be produced with the **carotenoid** maintaining a high total trans-form proportion, with good productivity, conveniently, and industrially advantageously.
- ST **carotenoid** emulsion prodn process
- IT Fatty acids, biological studies  
 RL: FFD (Food or feed use); MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); PYP (Physical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)  
 (C16-18, esters with sucrose, emulsifiers; process for producing **carotenoid** emulsion)
- IT Fatty acids, biological studies  
 RL: FFD (Food or feed use); MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); PYP (Physical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)  
 (C8-14, esters with sucrose, emulsifiers; process for producing **carotenoid** emulsion)
- IT Fatty acids, biological studies  
 RL: FFD (Food or feed use); MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); PYP (Physical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)  
 (**castor**-oil, esters with sorbitan, emulsifiers; process for producing **carotenoid** emulsion)
- IT Alkali metal compounds  
 RL: FFD (Food or feed use); MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); PYP (Physical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)  
 (emulsifiers; process for producing **carotenoid** emulsion)
- IT Fatty acids, biological studies  
 RL: FFD (Food or feed use); MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); PYP (Physical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)

# STN Columbus

- (esters, emulsifiers, of ascorbic acid and sorbitan; process for producing **carotenoid** emulsion)
- IT **Corn oil**  
 Diglycerides  
 Edible oils  
 Glycerides, biological studies  
 Monoglycerides  
 Paraffin oils  
 Terpenes, biological studies  
 RL: FFD (Food or feed use); PEP (Physical, engineering or chemical process); PYP (Physical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)  
 (high boiling org. liq.; process for producing **carotenoid** emulsion)
- IT Antioxidants  
 Emulsifying agents  
 Emulsions  
 (process for producing **carotenoid** emulsion)
- IT **Carotenes**, biological studies  
 RL: FFD (Food or feed use); PEP (Physical, engineering or chemical process); PYP (Physical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)  
 (process for producing **carotenoid** emulsion)
- IT Fatty acids, biological studies  
 RL: FFD (Food or feed use); MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); PYP (Physical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)  
 (tall-oil, esters with sorbitan, emulsifiers; process for producing **carotenoid** emulsion)
- IT 137-66-6, Ascorbic acid palmitate 1310-73-2, Sodium hydroxide, biological studies  
 RL: FFD (Food or feed use); MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); PYP (Physical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)  
 (emulsifiers; process for producing **carotenoid** emulsion)
- IT 25496-72-4, Monoolein  
 RL: FFD (Food or feed use); PEP (Physical, engineering or chemical process); PYP (Physical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)  
 (high boiling org. liq.; process for producing **carotenoid** emulsion)
- IT 472-61-7, Astaxanthin 472-70-8, Cryptoxanthin 514-78-3, Canthaxanthin 3604-90-8, Citranaxanthin 7235-40-7,  $\beta$ -**Carotene** 12676-20-9, Apocarotenal  
 RL: FFD (Food or feed use); PEP (Physical, engineering or chemical process); PYP (Physical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)  
 (process for producing **carotenoid** emulsion)

L6 ANSWER 23 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN

## Full Text

AN 1982:508798 CAPLUS  
 DN 97:108798  
 ED Entered STN: 12 May 1984  
 TI Low fat comestible spread  
 IN Miller, Donald E.; Werstak, Charles E.  
 PA SCM Corp. , USA  
 SO Eur. Pat. Appl., 21 pp.  
 CODEN: EPXXDW  
 DT Patent  
 LA English  
 IC A23D003-00; A23L001-24; A23C020-00

## STN Columbus

CC 17-9 (Food and Feed Chemistry)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 49705	A1	19820421	EP 1980-106140	19801009
	R: AT, BE, CH, DE, FR, GB, IT, LU, NL, SE				
PRAI	EP 1980-106140		19801009		

CLASS

	PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
	EP 49705	IC	A23D003-00IC A23L001-24IC A23C020-00
AB	An oil-in-water emulsion suitable for use in the prodn. of low-fat analogs of margarine, mayonnaise, or cheese is prepd. from an emulsifier, a thickening agent, a fat with a Wiley m.p. of 24-41° and a solid fat index at 35.5° of ≤20 and at 37.5° essentially zero, and optionally flavoring and coloring agents. Thus, water (68.31%) was mixed with Methocel K-100M (hydroxypropylmethyl cellulose) [9004-65-3] (0.5%), Avicel RC 581 (cellulose prepn.) [51395-75-6] (0.5%), and β-carotene (0.09%) with heat; Dur-em 114 emulsifier (monoglycerides) (4.0%), dewaxed corn oil (11.25%), hydrogenated cottonseed-soybean oil (13.75%), and artificial butter flavor (0.1%) were added; the material was homogenized at 1000-2000 psig; salt was added; and the emulsion was cooled, yielding a margarine-like product.		
ST	emulsion food fat; margarine fat low emulsion; cheese substitute emulsion; mayonnaise substitute emulsion		
IT	Soybean oil		
	RL: BIOL (Biological study)		
	(cottonseed oil mixt. with, hydrogenated, food fat-low emulsion contg.)		
IT	Butter substitutes		
	Cheese substitutes		
	Margarine		
	(fat-low, emulsion for)		
IT	Corn oil		
	RL: BIOL (Biological study)		
	(food fat-low emulsion contg.)		
IT	Cottonseed oil		
	RL: BIOL (Biological study)		
	(soybean oil mixt. with, hydrogenated, food fat-low emulsion contg.)		
IT	Mayonnaise		
	(substitutes, fat-low, emulsion for)		
IT	Food		
	(emulsions, fat-low, manuf. of)		
IT	Glycerides, biological studies		
	RL: BIOL (Biological study)		
	(mono-, in food fat-low emulsion manuf.)		
IT	9004-32-4	9004-65-3	51395-75-6
	RL: BIOL (Biological study)		
	(in food fat-low emulsion manuf.)		
IT	9004-34-6, biological studies		
	RL: BIOL (Biological study)		
	(microcryst., in food fat-low emulsion manuf.)		

L6 ANSWER 24 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN

Full Text

AN 1980:406377 CAPLUS

DN 93:6377

ED Entered STN: 12 May 1984

TI Stable clear liquid release agent

IN Hanson, Harold W., Sr.

PA Par-Way Mfg. Co., USA

SO U.S., 4 pp. Cont.-in-part of U.S. Ser. No. 532,850. abandoned.

## STN Columbus

CODEN: USXXAM

DT Patent  
 LA English  
 IC A23D005-00  
 NCL 426250000  
 CC 17-2 (Foods)  
 FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4192898	A	19800311	US 1978-916116	19780616
	US 4096258	A	19780620	US 1977-772929	19770228
PRAI	US 1974-532850		19741216		
	US 1975-621309		19751010		
	US 1977-772929		19770228		

## CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 4192898	IC	A23D005-00
	NCL	426250000

AB A stable clear pan release agent consists of 0.25-2% by wt. Polysorbate 80 [9005-65-6] in a mixt. of 2 or more oils, the major oil being liq. at room temp., and the minor one being solid at room temp. The oils are agitated at ~74°, rapidly chilled and worked to at least 25°; worked at that temp., and combined with CO<sub>2</sub> propellant to yield an aerosol product. Thus, about half of 2675 lb soybean oil and 1784 lb coconut oil were **heated** and mixed to 70°, the immersion **heaters** were cut off, 240 lb double-bleached lecithin was mixed in for 10 min, the balance of the soybean and coconut oils was added followed by 36.9 lb Polysorbate 80, 2.4 lb BEX butter deriv., and 3.8 or  $\beta$ -**carotene**. The batch was mixed for 3 min, cooled to ~60°, and passed through a 2-stage homogenizer (1000 and 3500 psi, resp.), and cooled to ~38°. The blend was agitated rapidly in a Votator while chilling to ~21°, and then worked with a high-speed paddle mixer. The product was clear and brilliant.

ST pan release agent; cooking utensil release agent

IT Coconut oil

Corn oil

Cottonseed oil

Lecithins, biological studies

Peanut oil

Soybean oil

RL: BIOL (Biological study)

(of cooking utensil release agents)

IT Oils

RL: BIOL (Biological study)

(**palm** kernel, of cooking utensil release agents)

IT Oils

RL: BIOL (Biological study)

(**palm**, of cooking utensil release agents)

IT Cooking utensils

(release agents for)

IT 637-12-7 9005-65-6

RL: BIOL (Biological study)

(of cooking utensil release agents)

IT 124-38-9, uses and miscellaneous

RL: USES (Uses)

(propellant, for aerosol cooking utensil release agents)

=> d his

(FILE 'HOME' ENTERED AT 17:00:22 ON 29 OCT 2004)

## STN Columbus

FILE 'CAPLUS' ENTERED AT 17:00:37 ON 29 OCT 2004

L1 45 S FUEL AND (VITAMIN E OR TOCOPHEROL)  
L2 2 S L1 AND CAROTENE  
L3 609809 S GRAIN OR FESCUE OR CLOVER OR WHEAT OR BARLEY OR OATS OR RYE O  
L4 4094 S L3 AND (CAROTENE OR CAROTENOID OR LYCOPENE LUTEIN OR BETATENE  
L5 316 S L4 AND (VEGETABLE OIL OR MEADOWFOAM OR PEANUT OR COTTONSEED O  
L6 36 S L5 AND (THERMAL OR HEAT?)

=&gt; s l5 and (vitamin e or tocopherol)

176528 VITAMIN

49415 VITAMINS

195026 VITAMIN

(VITAMIN OR VITAMINS)

1802584 E

28667 VITAMIN E

(VITAMIN(W)E)

27205 TOCOPHEROL

8044 TOCOPHEROLS

29454 TOCOPHEROL

(TOCOPHEROL OR TOCOPHEROLS)

L7 107 L5 AND (VITAMIN E OR TOCOPHEROL)

=&gt; s l7 and diesel

40979 DIESEL

423 DIESELS

41029 DIESEL

(DIESEL OR DIESELS)

L8 1 L7 AND DIESEL

=&gt; d l8 all

L8 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2004 ACS on STN

Full Text

AN 2003:334695 CAPLUS

DN 138:336957

ED Entered STN: 02 May 2003

TI Corn oil processing and products comprising corn oil and corn meal  
obtained from cornIN Jakel, Neal T.; Kotowski, Doug; Ingvalson, Joel; Beaver, Michael J.;  
Ulrich, James F.; Amore, Francis; Tupy, Michael J.; Fox, Eugene J.;  
Patist, Alexander

PA Renessen, LLC, USA

SO U.S. Pat. Appl. Publ., 25 pp., Cont.-in-part of U.S. Ser. No. 927,836.

CODEN: USXXCO

DT Patent

LA English

IC ICM C11C001-00

ICS A21D002-00

NCL 554010000; 554020000; 426622000

CC 17-9 (Food and Feed Chemistry)

Section cross-reference(s): 18, 45, 51, 62

FAN.CNT 10

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2003083512	A1	20030501	US 2002-47725	20020115
	US 6610867	B2	20030826		
	US 2002193617	A1	20021219	US 2001-927836	20010810
	US 6648930	B2	20031118		
	US 2003224496	A1	20031204	US 2003-368521	20030218
PRAI	US 2000-637843	A2	20000810		
	US 2001-927836	A2	20010810		

## STN Columbus

US 1999-249280 A2 19990211  
 US 2002-47725 A2 20020115

## CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 2003083512	ICM	C11C001-00
	ICS	A21D002-00
	NCL	554010000; 554020000; 426622000
US 2003083512	ECLA	A23D009/00; A23K001/18K; A23K001/18L2; A23K001/18N; A23K001/18S; A23L001/10M; A23L001/105B; A23L001/30C; C08B030/10; C08L099/00; C11B001/04; C11B001/10; C11B003/00B; C12P007/06; A23D009/007; A23K001/00B2; A23K001/14; A23K001/16G; A23K001/16L; A23K001/18
US 2002193617	ECLA	A23D009/00; C11B001/10; C11B003/00B; C12P007/06; A23D009/007; A23J001/14C2; A23K001/00B2; A23K001/04; A23K110/; A23K001/10C; A23K001/14; A23K001/16G; A23K001/16L; A23K001/18; A23K001/18K; A23K001/18L2; A23K001/18N; A23K001/18S; A23L001/10M; A23L001/30C; B02B001/00; C08B030/10; C08L099/00; C11B001/04; C11B001/06
US 2003224496	ECLA	A23D009/00; A23D009/007; A23J001/14C2; A23K001/00B2; A23K001/04; A23K001/10; A23K001/10C; A23K001/14; A23K; A23K001/16L; A23K001/18; A23K001/18K; A23K001/18L2; A23K001/18N; A23K001/18S; A23L001/10M; A23L001/105; A23L001/30C; B02B001/00; C08B030/10; C08L099/00; C11B001/04; C11B001/06; C11B001/10; C11B003/00B; C12P
AB		<b>Corn oil and corn meal obtained from corn are included in useful products. The corn oil is extd. from the corn to form the corn meal. The corn grain process generally includes the steps of cracking corn grain having a total oil content of from about 3% to 30% by wt. and extg. the corn oil from the cracked corn grain. The corn oil is useful for making nutritionally enhanced edible oil or cooking oil, lubricants, biodiesel, fuel, cosmetics and oil-based or oil-contg. chem. products. The extd. corn meal is useful for making enhanced animal feed rations, snack food, blended food products, cosmetics, and fermn. broth additive.</b>
ST		<b>corn meal oil manuf feed food fuel cosmetic</b>
IT		<b>Fats and Glyceridic oils, biological studies</b>
		RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses) (animal; <b>corn</b> oil processing and products comprising <b>corn oil and corn meal obtained from corn</b> )
IT		<b>Food</b> (bars; <b>corn</b> oil processing and products comprising <b>corn oil and corn meal obtained from corn</b> )
IT		<b>Diesel fuel substitutes</b> (biodiesel; <b>corn</b> oil processing and products comprising <b>corn oil and corn meal obtained from corn</b> )
IT		<b>Oryza sativa</b> (bran; <b>corn</b> oil processing and products comprising <b>corn oil and corn meal obtained from corn</b> )
IT		<b>Bakery products</b> Triticum aestivum (byproducts; <b>corn</b> oil processing and products comprising <b>corn oil and corn meal obtained from corn</b> )
IT		<b>Solvent extraction</b> (continuous; <b>corn</b> oil processing and products comprising <b>corn oil and corn meal obtained from corn</b> )
IT		<b>Food viscosity</b> (controls for; <b>corn</b> oil processing and products comprising <b>corn oil and corn meal obtained from corn</b> )
IT		<b>Glutens</b> RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)

## STN Columbus

- (corn meal; corn oil processing and products comprising corn oil and corn meal obtained from corn)
- IT Acidity  
Air  
Antioxidants  
Biodegradable materials  
Bleaching  
Bread  
Breakfast cereal  
Canola  
Cottonseed  
Crosslinking agents  
Deodorization  
Dietary fiber  
Feed additives  
Feeding experiment  
Food additives  
Food processing  
Gallus domesticus  
Glycine max  
Helianthus annuus  
Herb  
Hordeum vulgare  
Micelles  
Nutrients  
Pigments, biological  
Rapeseed  
Rapeseed  
Solanum tuberosum  
Sorghum bicolor  
Spices  
Thickening agents  
Vinegar  
Zea mays  
(corn oil processing and products comprising corn oil and corn meal obtained from corn)
- IT Aldehydes, biological studies  
Anhydrides  
Epoxides  
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)  
(corn oil processing and products comprising corn oil and corn meal obtained from corn)
- IT Amino acids, biological studies  
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
(corn oil processing and products comprising corn oil and corn meal obtained from corn)
- IT Canola oil  
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
(corn oil processing and products comprising corn oil and corn meal obtained from corn)
- IT Carotenes, biological studies  
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
(corn oil processing and products comprising corn oil and corn meal obtained from corn)
- IT Enzymes, biological studies  
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
(corn oil processing and products comprising corn oil and corn meal obtained from corn)
- IT Fats and Glyceridic oils, biological studies  
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)

# STN Columbus

(corn oil processing and products comprising corn oil and corn meal obtained from corn)

IT Lipids, biological studies  
 RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
 (corn oil processing and products comprising corn oil and corn meal obtained from corn)

IT Mineral elements, biological studies  
 RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
 (corn oil processing and products comprising corn oil and corn meal obtained from corn)

IT Olive oil  
 RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
 (corn oil processing and products comprising corn oil and corn meal obtained from corn)

IT Palm oil  
 RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
 (corn oil processing and products comprising corn oil and corn meal obtained from corn)

IT Proteins  
 RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
 (corn oil processing and products comprising corn oil and corn meal obtained from corn)

IT Safflower oil  
 RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
 (corn oil processing and products comprising corn oil and corn meal obtained from corn)

IT Soybean oil  
 RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
 (corn oil processing and products comprising corn oil and corn meal obtained from corn)

IT Sterols  
 RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
 (corn oil processing and products comprising corn oil and corn meal obtained from corn)

IT Sunflower oil  
 RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
 (corn oil processing and products comprising corn oil and corn meal obtained from corn)

IT Tocopherols  
 RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
 (corn oil processing and products comprising corn oil and corn meal obtained from corn)

IT Vitamins  
 RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
 (corn oil processing and products comprising corn oil and corn meal obtained from corn)

IT Corn oil  
 RL: FFD (Food or feed use); IMF (Industrial manufacture); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (corn oil processing and products comprising corn oil and corn meal obtained from corn)

IT Flours and Meals  
 (corn; corn oil processing and products comprising corn oil and corn meal obtained from corn)

IT Bos taurus  
 (dairy cattle; corn oil processing and products comprising corn oil and corn meal obtained from corn)

IT Vitamins  
 RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
 (fat-sol.; corn oil processing and products comprising corn oil and corn meal obtained from corn)

IT Flours and Meals

## STN Columbus

(feather meal; **corn** oil processing and products comprising  
**corn** oil and **corn** meal obtained from **corn**)

IT Aquaculture  
Bos taurus  
Equus caballus  
Poultry  
Sus scrofa domestica  
(feed for; **corn** oil processing and products comprising  
**corn** oil and **corn** meal obtained from **corn**)

IT Catfish  
Tilapia  
(feeding; **corn** oil processing and products comprising  
**corn** oil and **corn** meal obtained from **corn**)

IT Zea mays  
(flour and meal; **corn** oil processing and products comprising  
**corn** oil and **corn** meal obtained from **corn**)

IT Binders  
(for food; **corn** oil processing and products comprising  
**corn** oil and **corn** meal obtained from **corn**)

IT Oryza sativa  
(hulls; **corn** oil processing and products comprising  
**corn** oil and **corn** meal obtained from **corn**)

IT Beverages  
(low calorie; **corn** oil processing and products comprising  
**corn** oil and **corn** meal obtained from **corn**)

IT Feather  
(meal; **corn** oil processing and products comprising  
**corn** oil and **corn** meal obtained from **corn**)

IT Bone meal  
Meat  
(meat-and-bone meal; **corn** oil processing and products  
comprising **corn** oil and **corn** meal obtained from  
**corn**)

IT Triticum aestivum  
(middlings; **corn** oil processing and products comprising  
**corn** oil and **corn** meal obtained from **corn**)

IT Cooking  
(oils for; **corn** oil processing and products comprising  
**corn** oil and **corn** meal obtained from **corn**)

IT Seed  
(oilseed, meal; **corn** oil processing and products comprising  
**corn** oil and **corn** meal obtained from **corn**)

IT Flours and Meals  
(oilseed; **corn** oil processing and products comprising  
**corn** oil and **corn** meal obtained from **corn**)

IT Fats and Glyceridic oils, biological studies  
Fats and Glyceridic oils, biological studies  
RL: BUU (Biological use, unclassified); FFD (Food or feed use); BIOL  
(Biological study); USES (Uses)  
(partially hydrogenated; **corn** oil processing and products  
comprising **corn** oil and **corn** meal obtained from  
**corn**)

IT Feed  
(pet; **corn** oil processing and products comprising  
**corn** oil and **corn** meal obtained from **corn**)

IT Food  
(porridge; **corn** oil processing and products comprising  
**corn** oil and **corn** meal obtained from **corn**)

IT Bran  
(rice; **corn** oil processing and products comprising  
**corn** oil and **corn** meal obtained from **corn**)

IT Food

# STN Columbus

(snack; **corn** oil processing and products comprising  
**corn** oil and **corn** meal obtained from **corn**)

IT Beverages  
(sports; **corn** oil processing and products comprising  
**corn** oil and **corn** meal obtained from **corn**)

IT Fats and Glyceridic oils, biological studies  
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
(stearins, oxy-; **corn** oil processing and products comprising  
**corn** oil and **corn** meal obtained from **corn**)

IT Fuel oil  
(substitutes; **corn** oil processing and products comprising  
**corn** oil and **corn** meal obtained from **corn**)

IT Feed  
(swine; **corn** oil processing and products comprising  
**corn** oil and **corn** meal obtained from **corn**)

IT 7440-37-1, Argon, biological studies 7727-37-9, Nitrogen, biological  
studies  
RL: BUU (Biological use, unclassified); FFD (Food or feed use); BIOL  
(Biological study); USES (Uses)  
(**corn** oil processing and products comprising **corn**  
oil and **corn** meal obtained from **corn**)

IT 56-87-1, L-Lysine, biological studies 63-68-3, L-Methionine, biological  
studies 64-17-5, Ethanol, biological studies 67-63-0, Isopropyl  
alcohol, biological studies 73-22-3, L-Tryptophan, biological studies  
77-92-9, Citric acid, biological studies 77-92-9D, Citric acid,  
monoglyceride derivs. 110-54-3, Hexane, biological studies 121-79-9,  
Propyl gallate 123-28-4, Dilauryl thiodipropionate 128-37-0, BHT,  
biological studies 137-66-6, Ascorbyl palmitate 458-37-7, Curcumin  
994-36-5, Sodium citrate 1107-26-2,  $\beta$ -Apo-8'-carotenal 6829-55-6,  
Tocotrienol 7235-40-7,  $\beta$ -Carotene 7647-14-5, Sodium  
chloride, biological studies 7664-38-2, Phosphoric acid, biological  
studies 9000-90-2,  $\alpha$ -Amylase 9001-92-7, Protease 9005-25-8,  
Starch, biological studies 9016-00-6, Dimethyl polysiloxane 9032-08-0,  
Glucoamylase 25013-16-5, BHA 25395-66-8, Ascorbyl stearate  
39413-05-3, Isopropyl citrate  
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
(**corn** oil processing and products comprising **corn**  
oil and **corn** meal obtained from **corn**)

IT 1393-63-1, Annatto  
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
(ext.; **corn** oil processing and products comprising  
**corn** oil and **corn** meal obtained from **corn**)

IT 124-38-9, Carbon dioxide, biological studies  
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
(supercrit.; **corn** oil processing and products comprising  
**corn** oil and **corn** meal obtained from **corn**)

=> s triticales

1923 TRITICALE

126 TRITICALES

L9 1931 TRITICALE

(TRITICALE OR TRITICALES)

=> s 19 and corn

111199 CORN

345 CORNS

111319 CORN

(CORN OR CORNS)

L10 250 L9 AND CORN

=> s 110 and fuel

## STN Columbus

340874 FUEL  
154939 FUELS  
389767 FUEL  
(FUEL OR FUELS)

L11 2 L10 AND FUEL

=> d l11 ti

L11 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2004 ACS on STN  
TI Quality of solid biofuels - database and field trials

=> d l11 2 ti

L11 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2004 ACS on STN  
TI Protein byproduct recovery in **fuel** ethanol processing of agricultural materials

=> d l11 1 all

L11 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2004 ACS on STN

### Full Text

AN 1999:713328 CAPLUS  
DN 132:24771  
ED Entered STN: 09 Nov 1999  
TI Quality of solid biofuels - database and field trials  
AU Hartmann, H.; Maier, L.; Bohm, T.  
CS Research Center of Agricultural Engineering, Munich University of Technology, Freising-Weihestephan, D-85354, Germany  
SO Biomass: A Growth Opportunity in Green Energy and Value-Added Products, Proceedings of the Biomass Conference of the Americas, 4th, Oakland, Calif., Aug. 29-Sept. 2, 1999 (1999), Volume 1, 273-279. Editor(s): Overend, Ralph P.; Chornet, Esteban. Publisher: Elsevier Science, Oxford, UK.  
CODEN: 68IQAG  
DT Conference  
LA English  
CC 52-1 (Electrochemical, Radiational, and Thermal Energy Technology)  
Section cross-reference(s): 11, 40, 60  
AB Quality aspects of solid biofuels were investigated in a new database. Most parameters varied greatly, particularly when annually harvested biomass was considered. For planning purposes the frequency distributions should be used rather than mean values. The quality of some crops may be changed by modified agricultural practices. Rainfall shortly after cutting can deplete chlorine and potassium in grass by 60 to 80%.  
ST solid biofuel quality database field trial; **fuel** gas manufg solid biofuel  
IT **Fuels**  
(biofuels, solid; field trials of solid biofuel quality and database of identity, age, origin, **fuel** characteristics, element and compd. content, testing methodol., related literature)  
IT Beech (Fagus)  
Miscanthus  
Spruce (Picea)  
Wheat straw  
(chlorine content of solid biofuel, from database)  
IT Straw  
Straw  
(**corn**; chlorine content of solid biofuel, from database)  
IT Bagasse  
Bark  
Compost

## STN Columbus

- Databases
- Grass (Poaceae)
- Hay
- Leaf
- Straw
  - (field trials of solid biofuel quality and database of identity, age, origin, **fuel** characteristics, element and compd. content, testing methodol., related literature)
- IT Fibers
  - RL: NUU (Other use, unclassified); USES (Uses)
    - (field trials of solid biofuel quality and database of identity, age, origin, **fuel** characteristics, element and compd. content, testing methodol., related literature)
- IT Mineral elements, occurrence
  - RL: OCU (Occurrence, unclassified); OCCU (Occurrence)
    - (frequency distribution, selected quality parameters, similar cereal straw types, from database)
- IT Wood
  - (natural, processed; field trials of solid biofuel quality and database of identity, age, origin, **fuel** characteristics, element and compd. content, testing methodol., related literature)
- IT Leaf
  - (needle; field trials of solid biofuel quality and database of identity, age, origin, **fuel** characteristics, element and compd. content, testing methodol., related literature)
- IT Calorific value
  - (net; frequency distribution, selected quality parameters, similar cereal straw types, from database)
- IT Flours and Meals
  - (oilseed cakes; field trials of solid biofuel quality and database of identity, age, origin, **fuel** characteristics, element and compd. content, testing methodol., related literature)
- IT Seed
  - Seed
    - (oilseed, meal; field trials of solid biofuel quality and database of identity, age, origin, **fuel** characteristics, element and compd. content, testing methodol., related literature)
- IT Flours and Meals
  - (oilseed; field trials of solid biofuel quality and database of identity, age, origin, **fuel** characteristics, element and compd. content, testing methodol., related literature)
- IT Fruit
  - (pips; field trials of solid biofuel quality and database of identity, age, origin, **fuel** characteristics, element and compd. content, testing methodol., related literature)
- IT Fermentation
  - (products, pomace; field trials of solid biofuel quality and database of identity, age, origin, **fuel** characteristics, element and compd. content, testing methodol., related literature)
- IT Straw
  - Straw
    - (rape; chlorine content of solid biofuel, from database)
- IT Straw
  - Straw
    - (rye; chlorine content of solid biofuel, from database)
- IT Nut (seed)
  - (shells; field trials of solid biofuel quality and database of identity, age, origin, **fuel** characteristics, element and compd. content, testing methodol., related literature)
- IT Poplar (Populus)
- Willow (Salix)
  - (short rotation forestry; chlorine content of solid biofuel, from

# STN Columbus

```

        database)
IT  Corn
    Corn
    Rape (plant)
    Rape (plant)
    Rye
    Rye
    Sunflower
    Sunflower
    Triticale
    Triticale
        (straw; chlorine content of solid biofuel, from database)
IT  Straw
    Straw
        (sunflower; chlorine content of solid biofuel, from database)
IT  Straw
    Straw
        (triticale; chlorine content of solid biofuel, from database)
IT  Rye
    Triticale
    Wheat
        (whole crop; chlorine content of solid biofuel, from database)
IT  7782-50-5, Chlorine, occurrence
    RL: OCU (Occurrence, unclassified); OCCU (Occurrence)
        (chlorine content, solid biofuels)
IT  7704-34-9, Sulfur, occurrence
    RL: OCU (Occurrence, unclassified); OCCU (Occurrence)
        (effect of harvesting date and field retention time, selected quality
        parameters in grass, from database)
IT  7440-09-7, Potassium, occurrence  7727-37-9, Nitrogen, occurrence
    RL: OCU (Occurrence, unclassified); OCCU (Occurrence)
        (frequency distribution, selected quality parameters, similar cereal
        straw types, from database)

```

=> log y

COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	138.86	139.07
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	-5.60	-5.60

STN INTERNATIONAL LOGOFF AT 17:18:30 ON 29 OCT 2004